

1FW16

**CRF Errors Edited by the STIC Systems
Branch**

Serial Number: 09/993,234B

CRF Edit Date: 10/8/04
Edited by: AR

____ Realigned nucleic acid/amino acid numbers/text in cases where the sequence
text "wrapped" to the next line

ENTERED

____ Corrected the SEQ ID NO. Sequence numbers edited were:

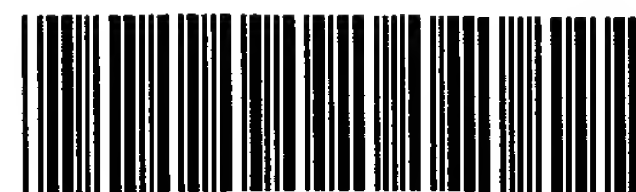
____ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID
NO's edited:

/ Deleted: / invalid beginning/end-of-file text ; ____ page numbers

____ Inserted mandatory headings/numeric identifiers, specifically:

____ Moved responses to same line as heading/numeric identifier, specifically:

____ Other:



IFW16

RAW SEQUENCE LISTING

DATE: 10/08/2004

PATENT APPLICATION: US/09/993,234B

TIME: 18:04:36

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\10082004\I993234B.raw

SEQUENCE LISTING

6 (1) GENERAL INFORMATION:

8 (i) APPLICANT: Ashkenazi, Avi J.

10 (ii) TITLE OF INVENTION: Apo-2 LI AND Apo-3 POLYPEPTIDES

12 (iii) NUMBER OF SEQUENCES: 28

14 (iv) CORRESPONDENCE ADDRESS:

15 (A) ADDRESSEE: Genentech, Inc.

16 (B) STREET: 1 DNA Way

17 (C) CITY: South San Francisco

18 (D) STATE: California

19 (E) COUNTRY: USA

20 (F) ZIP: 94080

22 (v) COMPUTER READABLE FORM:

23 (A) MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk

24 (B) COMPUTER: IBM PC compatible

25 (C) OPERATING SYSTEM: PC-DOS/MS-DOS

26 (D) SOFTWARE: WinPatin (Genentech)

28 (vi) CURRENT APPLICATION DATA:

C--> 29 (A) APPLICATION NUMBER: US/09/993,234B

C--> 30 (B) FILING DATE: 19-Nov-2001

31 (C) CLASSIFICATION:

41 (vii) PRIOR APPLICATION DATA:

34 (A) APPLICATION NUMBER: 08/828683

35 (B) FILING DATE: 31-MAR-1997

38 (A) APPLICATION NUMBER: 08/625328

39 (B) FILING DATE: 1-Apr-1996

42 (A) APPLICATION NUMBER: 08/710802

43 (B) FILING DATE: 23-Sep-1996

45 (viii) ATTORNEY/AGENT INFORMATION:

46 (A) NAME: Marschang, Diane L.

47 (B) REGISTRATION NUMBER: 35,600

48 (C) REFERENCE/DOCKET NUMBER: P1007P1D1

50 (ix) TELECOMMUNICATION INFORMATION:

51 (A) TELEPHONE: 650/225-5416

52 (B) TELEFAX: 650/952-9881

53 (2) INFORMATION FOR SEQ ID NO: 1:

55 (i) SEQUENCE CHARACTERISTICS:

56 (A) LENGTH: 181 amino acids

57 (B) TYPE: Amino Acid

58 (D) TOPOLOGY: Linear

60 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

62 Met Glu Gln Arg Pro Arg Gly Cys Ala Ala Val Ala Ala Ala Leu

63 1 5 10 15

RAW SEQUENCE LISTING

DATE: 10/08/2004

PATENT APPLICATION: US/09/993,234B

TIME: 18:04:36

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\10082004\I993234B.raw

```

65  Leu Leu Val Leu Leu Gly Ala Arg Ala Gln Gly Gly Thr Arg Ser
66                20                25                30
68  Pro Arg Cys Asp Cys Ala Gly Asp Phe His Lys Lys Ile Gly Leu
69                35                40                45
71  Phe Cys Cys Arg Gly Cys Pro Ala Gly His Tyr Leu Lys Ala Pro
72                50                55                60
74  Cys Thr Glu Pro Cys Gly Asn Ser Thr Cys Leu Val Cys Pro Gln
75                65                70                75
77  Asp Thr Phe Leu Ala Trp Glu Asn His His Asn Ser Glu Cys Ala
78                80                85                90
80  Arg Cys Gln Ala Cys Asp Glu Gln Ala Ser Gln Val Ala Leu Glu
81                95                100               105
83  Asn Cys Ser Ala Val Ala Asp Thr Arg Cys Gly Cys Lys Pro Gly
84                110               115               120
86  Trp Phe Val Glu Cys Gln Val Ser Gln Cys Val Ser Ser Ser Pro
87                125               130               135
89  Phe Tyr Cys Gln Pro Cys Leu Asp Cys Gly Ala Leu His Arg His
90                140               145               150
92  Thr Arg Leu Leu Cys Ser Arg Arg Asp Thr Asp Cys Gly Thr Cys
93                155               160               165
95  Leu Pro Gly Phe Tyr Glu His Gly Asp Gly Cys Val Ser Cys Pro
96                170               175               180
98  Thr

```

101 (2) INFORMATION FOR SEQ ID NO: 2:

103 (i) SEQUENCE CHARACTERISTICS:

104 (A) LENGTH: 433 base pairs

105 (B) TYPE: Nucleic Acid

106 (C) STRANDEDNESS: Single

107 (D) TOPOLOGY: Linear

109 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

```

112 CTGCTGGGGG CCCGGGCCAG NGGCGGCACT CGTAGCCCCA GGTGTGACTG 50
114 TGCCGGTGAC TTCCACAAGA AGATTGGTCT GTTTTGTTGC AGAGGCTGCC 100
116 CAGCGGGGCA ACTACCTGAA GGCCCCTTGC ACGGAGCCCT GCGCAACTCC 150
118 ACCTGCCTTG TGTGTCCCCA AGACACCTTC TTGGCCTGGG AGAACCACCA 200
120 TAATTCTGAA TGTGCCCCGCT GCCAGGCCTG TGATGAGCAG GCCTCCCAGG 250
122 TGGCGCTGGA GAACTGTTCA GCAGTGGCCG ACACCCGCTG TGGCTGTAAG 300
124 CAGGGCTGGT TTGTGGAGTG CCAGGGTCAG CCAATGTGTC AGCAGTTTCA 350
126 CCCTTCTAAT GCCAACCATG CCTAGACTGC GGGGCCCTGC AACGCAACAC 400
128 ACGGCTAATN TGTTTCCCGC AGAGATNATT GTT 433

```

130 (2) INFORMATION FOR SEQ ID NO: 3:

132 (i) SEQUENCE CHARACTERISTICS:

133 (A) LENGTH: 28 base pairs

134 (B) TYPE: Nucleic Acid

135 (C) STRANDEDNESS: Single

136 (D) TOPOLOGY: Linear

138 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

141 CCCGCTGCCA GGCCTGTGAT GAGCAGGC 28

143 (2) INFORMATION FOR SEQ ID NO: 4:

145 (i) SEQUENCE CHARACTERISTICS:

RAW SEQUENCE LISTING

DATE: 10/08/2004

PATENT APPLICATION: US/09/993,234B

TIME: 18:04:36

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\10082004\I993234B.raw

```

146      (A) LENGTH: 28 base pairs
147      (B) TYPE: Nucleic Acid
148      (C) STRANDEDNESS: Single
149      (D) TOPOLOGY: Linear
151      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
154      CAGGGCCCCG CAGTCTAGGC ATGGTTGG 28
156      (2) INFORMATION FOR SEQ ID NO: 5:
158      (i) SEQUENCE CHARACTERISTICS:
159      (A) LENGTH: 1438 base pairs
160      (B) TYPE: Nucleic Acid
161      (C) STRANDEDNESS: Single
162      (D) TOPOLOGY: Linear
164      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
167      GAATTCCGGC GCGGAGGCCG AGAGAGAAGT CACTTGCCCT GGCTCTACCT 50
169      TGAAGTGGTT CTCAGGGTTG GGGCGAGAGT CGGGGTGGGG ACCGAGATGC 100
171      AGCTCTATCC TGTGCCCCTG GTCGCAGCAG GCAGCCCAGC GCTTCGCGTG 150
173      TTCTACTTGG CCTGTCCGCT GCCGCCTAAT GAGCTCAGGT CTAGGCCGAG 200
175      CAGAGGGGGC ACCTGGTCGG ACTCGGTTGG GCTCGGGCGG CCCC GCCTCC 250
177      CCCC GCCCGC CAGGCGGGCC CTTCTCGACG GCGCGGGGCG GGCCCTGCGG 300
179      GCGCGGGGCT GAAGGCGGAA CCACGACGGG CAGAGAGCAC GGAGCCGGGA 350
181      AGCCCCTGGG CGCCCGTCGG AGGGCTATGG AGCAGCGGCC GCGGGGCTGC 400
183      GCGGCGGTGG CGGCGGCGCT CCTCCTGGTG CTGCTGGGGG CCGGGGCCCA 450
185      GGGCGGCACT CGTAGCCCCA GGTGTGACTG TGCCGGTGAC TTCCACAAGA 500
187      AGATTGGTCT GTTTTGTTC AGAGGCTGCC CAGCGGGGCA CTACCTGAAG 550
189      GCCCCTTGCA CGGAGCCCTG CGGCAACTCC ACCTGCCTTG TGTGTCCCCA 600
191      AGACACCTTC TTGGCCTGGG AGAACCACCA TAATTCTGAA TGTGCCCGCT 650
193      GCCAGGCCTG TGATGAGCAG GCCTCCCAGG TGGCGCTGGA GAACTGTTCA 700
195      GCAGTGGCCG ACACCCGCTG TGGCTGTAAG CCAGGCTGGT TTGTGGAGTG 750
197      CCAGGTCAGC CAATGTGTCA GCAGTTCACC CTTCTACTGC CAACCATGCC 800
199      TAGACTGCGG GGCCCTGCAC CGCCACACAC GGCTACTCTG TTCCCGCAGA 850
201      GATACTGACT GTGGGACCTG CCTGCCTGGC TTCTATGAAC ATGGCGATGG 900
203      CTGCGTGTCC TGCCCCACGT AATTCCTAGC TGTCGTGGGA TGGAGGGAAG 950
205      GGCGGCTGGG AGCAGAGCAG GGGCCTGGGG TGGGGCAGGT GCTGCTGGTT 1000
207      CAGGAATAGG AAGAGGGGAT AGGGAGGAGG GAGCCTTGGC CCTGTGATGG 1050
209      GTGGGCCCCA CTTCAGGCAA ACTTAGATGG CAAAAGAGCA ATCTGGATCC 1100
211      GCCTTAGCCA GATACATAAG GGTATTTGCC TTCACTTTCA GCCAGCATTC 1150
213      CCCCCAGCGA TCCTAGCCAG ATATTACAGA TGATTTGTCA CTTACACAGA 1200
215      GAGTCACATT GATATAGCTT TAAAACTTGG GCTGAAGGAG GTTGAGGCTG 1250
217      CAGTGAGCTA TGATCGTGCC ACTGCACTTC AGCCTGGGCA ACAGAGCGAG 1300
219      ACCTATTAAA TAAATAAATA AATATTAAAT CTATTAAATA TTAAATATTA 1350
221      AATCTATTAA ATAAATAAAT ACAAAGGGCT GAGAGTCAGG ACTGTGCTGC 1400
223      TAGTTCTCTA GGGGATCTTG GGCAAGTGCA GAGAATTC 1438
225      (2) INFORMATION FOR SEQ ID NO: 6:
227      (i) SEQUENCE CHARACTERISTICS:
228      (A) LENGTH: 417 amino acids
229      (B) TYPE: Amino Acid
230      (D) TOPOLOGY: Linear
232      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
234      Met Glu Gln Arg Pro Arg Gly Cys Ala Ala Val Ala Ala Ala Leu

```

RAW SEQUENCE LISTING

DATE: 10/08/2004

PATENT APPLICATION: US/09/993,234B

TIME: 18:04:36

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\10082004\I993234B.raw

235	1	5	10	15
237	Leu Leu Val Leu Leu Gly Ala Arg Ala Gln Gly Gly Thr Arg Ser			
238		20	25	30
240	Pro Arg Cys Asp Cys Ala Gly Asp Phe His Lys Lys Ile Gly Leu			
241		35	40	45
243	Phe Cys Cys Arg Gly Cys Pro Ala Gly His Tyr Leu Lys Ala Pro			
244		50	55	60
246	Cys Thr Glu Pro Cys Gly Asn Ser Thr Cys Leu Val Cys Pro Gln			
247		65	70	75
249	Asp Thr Phe Leu Ala Trp Glu Asn His His Asn Ser Glu Cys Ala			
250		80	85	90
252	Arg Cys Gln Ala Cys Asp Glu Gln Ala Ser Gln Val Ala Leu Glu			
253		95	100	105
255	Asn Cys Ser Ala Val Ala Asp Thr Arg Cys Gly Cys Lys Pro Gly			
256		110	115	120
258	Trp Phe Val Glu Cys Gln Val Ser Gln Cys Val Ser Ser Ser Pro			
259		125	130	135
261	Phe Tyr Cys Gln Pro Cys Leu Asp Cys Gly Ala Leu His Arg His			
262		140	145	150
264	Thr Arg Leu Leu Cys Ser Arg Arg Asp Thr Asp Cys Gly Thr Cys			
265		155	160	165
267	Leu Pro Gly Phe Tyr Glu His Gly Asp Gly Cys Val Ser Cys Pro			
268		170	175	180
270	Thr Ser Thr Leu Gly Ser Cys Pro Glu Arg Cys Ala Ala Val Cys			
271		185	190	195
273	Gly Trp Arg Gln Met Phe Trp Val Gln Val Leu Leu Ala Gly Leu			
274		200	205	210
276	Val Val Pro Leu Leu Leu Gly Ala Thr Leu Thr Tyr Thr Tyr Arg			
277		215	220	225
279	His Cys Trp Pro His Lys Pro Leu Val Thr Ala Asp Glu Ala Gly			
280		230	235	240
282	Met Glu Ala Leu Thr Pro Pro Pro Ala Thr His Leu Ser Pro Leu			
283		245	250	255
285	Asp Ser Ala His Thr Leu Leu Ala Pro Pro Asp Ser Ser Glu Lys			
286		260	265	270
288	Ile Cys Thr Val Gln Leu Val Gly Asn Ser Trp Thr Pro Gly Tyr			
289		275	280	285
291	Pro Glu Thr Gln Glu Ala Leu Cys Pro Gln Val Thr Trp Ser Trp			
292		290	295	300
294	Asp Gln Leu Pro Ser Arg Ala Leu Gly Pro Ala Ala Ala Pro Thr			
295		305	310	315
297	Leu Ser Pro Glu Ser Pro Ala Gly Ser Pro Ala Met Met Leu Gln			
298		320	325	330
300	Pro Gly Pro Gln Leu Tyr Asp Val Met Asp Ala Val Pro Ala Arg			
301		335	340	345
303	Arg Trp Lys Glu Phe Val Arg Thr Leu Gly Leu Arg Glu Ala Glu			
304		350	355	360
306	Ile Glu Ala Val Glu Val Glu Ile Gly Arg Phe Arg Asp Gln Gln			
307		365	370	375

RAW SEQUENCE LISTING

DATE: 10/08/2004

PATENT APPLICATION: US/09/993,234B

TIME: 18:04:36

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\10082004\I993234B.raw

```

309 Tyr Glu Met Leu Lys Arg Trp Arg Gln Gln Gln Pro Ala Gly Leu
310           380           385           390
312 Gly Ala Val Tyr Ala Ala Leu Glu Arg Met Gly Leu Asp Gly Cys
313           395           400           405
315 Val Glu Asp Leu Arg Ser Arg Leu Gln Arg Gly Pro
316           410           415
318 (2) INFORMATION FOR SEQ ID NO: 7:
320     (i) SEQUENCE CHARACTERISTICS:
321         (A) LENGTH: 27 base pairs
322         (B) TYPE: Nucleic Acid
323         (C) STRANDEDNESS: Single
324         (D) TOPOLOGY: Linear
326     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
329 GCGGCTCTGG TGGCCCTTGC AGAAGCC 27
331 (2) INFORMATION FOR SEQ ID NO: 8:
333     (i) SEQUENCE CHARACTERISTICS:
334         (A) LENGTH: 25 base pairs
335         (B) TYPE: Nucleic Acid
336         (C) STRANDEDNESS: Single
337         (D) TOPOLOGY: Linear
339     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
342 TTCGGCCGAG AAGTTGAGAA ATGTC 25
344 (2) INFORMATION FOR SEQ ID NO: 9:
346     (i) SEQUENCE CHARACTERISTICS:
347         (A) LENGTH: 1634 base pairs
348         (B) TYPE: Nucleic Acid
349         (C) STRANDEDNESS: Single
350         (D) TOPOLOGY: Linear
352     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
355 CGGGCCCTGC GGGCGCGGGG CTGAAGGCGG AACCACGACG GGCAGAGAGC 50
357 ACGGAGCCGG GAAGCCCCTG GGCGCCCGTC GGAGGGCT   ATG GAG 94
358                               Met Glu
359                               1
361 CAG CGG CCG CGG GGC TGC GCG GCG GTG GCG GCG GCG CTC 133
362 Gln Arg Pro Arg Gly Cys Ala Ala Val Ala Ala Ala Leu
363           5           10           15
365 CTC CTG GTG CTG CTG GGG GCC CGG GCC CAG GGC GGC ACT 172
366 Leu Leu Val Leu Leu Gly Ala Arg Ala Gln Gly Gly Thr
367           20           25
369 CGT AGC CCC AGG TGT GAC TGT GCC GGT GAC TTC CAC AAG 211
370 Arg Ser Pro Arg Cys Asp Cys Ala Gly Asp Phe His Lys
371           30           35           40
373 AAG ATT GGT CTG TTT TGT TGC AGA GGC TGC CCA GCG GGG 250
374 Lys Ile Gly Leu Phe Cys Cys Arg Gly Cys Pro Ala Gly
375           45           50
377 CAC TAC CTG AAG GCC CCT TGC ACG GAG CCC TGC GGC AAC 289
378 His Tyr Leu Lys Ala Pro Cys Thr Glu Pro Cys Gly Asn
379           55           60           65
381 TCC ACC TGC CTT GTG TGT CCC CAA GAC ACC TTC TTG GCC 328

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/993,234B

DATE: 10/08/2004

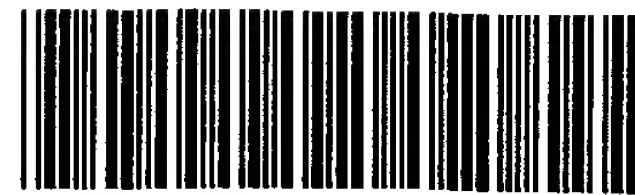
TIME: 18:04:37

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\10082004\I993234B.raw

L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]

L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]



IFW16

RAW SEQUENCE LISTING

DATE: 10/07/2004

PATENT APPLICATION: US/09/993,234B

TIME: 11:16:55

Input Set : A:\P1007P1D1seq1 (new)-response to 6-29-04 action.txt

Output Set: N:\CRF4\10072004\I993234B.raw

SEQUENCE LISTING

W--> 1 Patin Docket Preview

W--> 8 (1) GENERAL INFORMATION:

- 10 (i) APPLICANT: Ashkenazi, Avi J.
- 12 (ii) TITLE OF INVENTION: Apo-2 LI AND Apo-3 POLYPEPTIDES
- 14 (iii) NUMBER OF SEQUENCES: 28
- 16 (iv) CORRESPONDENCE ADDRESS:
 - 17 (A) ADDRESSEE: Genentech, Inc.
 - 18 (B) STREET: 1 DNA Way
 - 19 (C) CITY: South San Francisco
 - 20 (D) STATE: California
 - 21 (E) COUNTRY: USA
 - 22 (F) ZIP: 94080

**Does Not Comply
Corrected Diskette Needed**

- 24 (v) COMPUTER READABLE FORM:
 - 25 (A) MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
 - 26 (B) COMPUTER: IBM PC compatible
 - 27 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 - 28 (D) SOFTWARE: WinPatin (Genentech)

30 (vi) CURRENT APPLICATION DATA:

- C--> 31 (A) APPLICATION NUMBER: US/09/993,234B
- C--> 32 (B) FILING DATE: 19-Nov-2001
- 33 (C) CLASSIFICATION:

43 (vii) PRIOR APPLICATION DATA:

- 36 (A) APPLICATION NUMBER: 08/828683
- 37 (B) FILING DATE: 31-MAR-1997
- 40 (A) APPLICATION NUMBER: 08/625328
- 41 (B) FILING DATE: 1-Apr-1996
- 44 (A) APPLICATION NUMBER: 08/710802
- 45 (B) FILING DATE: 23-Sep-1996

47 (viii) ATTORNEY/AGENT INFORMATION:

- 48 (A) NAME: Marschang, Diane L.
- 49 (B) REGISTRATION NUMBER: 35,600
- 50 (C) REFERENCE/DOCKET NUMBER: P1007P1D1

52 (ix) TELECOMMUNICATION INFORMATION:

- 53 (A) TELEPHONE: 650/225-5416
- 54 (B) TELEFAX: 650/952-9881

55 (2) INFORMATION FOR SEQ ID NO: 1:

57 (i) SEQUENCE CHARACTERISTICS:

- 58 (A) LENGTH: 181 amino acids
- 59 (B) TYPE: Amino Acid
- 60 (D) TOPOLOGY: Linear

62 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

64 Met Glu Gln Arg Pro Arg Gly Cys Ala Ala Val Ala Ala Ala Leu

RAW SEQUENCE LISTING

DATE: 10/07/2004

PATENT APPLICATION: US/09/993,234B

TIME: 11:16:55

Input Set : A:\P1007P1D1seq1 (new)-response to 6-29-04 action.txt

Output Set: N:\CRF4\10072004\I993234B.raw

65	1	5	10	15
67	Leu Leu Val Leu Leu Gly Ala Arg Ala Gln Gly Gly Thr Arg Ser			
68		20	25	30
70	Pro Arg Cys Asp Cys Ala Gly Asp Phe His Lys Lys Ile Gly Leu			
71		35	40	45
73	Phe Cys Cys Arg Gly Cys Pro Ala Gly His Tyr Leu Lys Ala Pro			
74		50	55	60
76	Cys Thr Glu Pro Cys Gly Asn Ser Thr Cys Leu Val Cys Pro Gln			
77		65	70	75
79	Asp Thr Phe Leu Ala Trp Glu Asn His His Asn Ser Glu Cys Ala			
80		80	85	90
82	Arg Cys Gln Ala Cys Asp Glu Gln Ala Ser Gln Val Ala Leu Glu			
83		95	100	105
85	Asn Cys Ser Ala Val Ala Asp Thr Arg Cys Gly Cys Lys Pro Gly			
86		110	115	120
88	Trp Phe Val Glu Cys Gln Val Ser Gln Cys Val Ser Ser Ser Pro			
89		125	130	135
91	Phe Tyr Cys Gln Pro Cys Leu Asp Cys Gly Ala Leu His Arg His			
92		140	145	150
94	Thr Arg Leu Leu Cys Ser Arg Arg Asp Thr Asp Cys Gly Thr Cys			
95		155	160	165
97	Leu Pro Gly Phe Tyr Glu His Gly Asp Gly Cys Val Ser Cys Pro			
98		170	175	180

100 Thr

103 (2) INFORMATION FOR SEQ ID NO: 2:

105 (i) SEQUENCE CHARACTERISTICS:

106 (A) LENGTH: 433 base pairs

107 (B) TYPE: Nucleic Acid

108 (C) STRANDEDNESS: Single

109 (D) TOPOLOGY: Linear

111 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

114 CTGCTGGGGG CCCGGGCCAG NGGCGGCACT CGTAGCCCCA GGTGTGACTG 50

116 TGCCGGTGAC TTCCACAAGA AGATTGGTCT GTTTTGTGTC AGAGGCTGCC 100

118 CAGCGGGGCA ACTACCTGAA GGCCCCTTGC ACGGAGCCCT GCGCAACTCC 150

120 ACCTGCCTTG TGTGTCCCCA AGACACCTTC TTGGCCTGGG AGAACCACCA 200

122 TAATTCTGAA TGTGCCCCGCT GCCAGGCCTG TGATGAGCAG GCCTCCCAGG 250

124 TGGCGCTGGA GAACTGTTCA GCAGTGGCCG ACACCCGCTG TGGCTGTAAG 300

126 CAGGGCTGGT TTGTGGAGTG CCAGGGTCAG CCAATGTGTC AGCAGTTTCA 350

128 CCCTTCTAAT GCCAACCATG CCTAGACTGC GGGGCCCTGC AACGCAACAC 400

130 ACGGCTAATN TGTTTCCCGC AGAGATNATT GTT 433

132 (2) INFORMATION FOR SEQ ID NO: 3:

134 (i) SEQUENCE CHARACTERISTICS:

135 (A) LENGTH: 28 base pairs

136 (B) TYPE: Nucleic Acid

137 (C) STRANDEDNESS: Single

138 (D) TOPOLOGY: Linear

140 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

143 CCCGCTGCCA GGCCTGTGAT GAGCAGGC 28

145 (2) INFORMATION FOR SEQ ID NO: 4:

RAW SEQUENCE LISTING

DATE: 10/07/2004

PATENT APPLICATION: US/09/993,234B

TIME: 11:16:55

Input Set : A:\P1007P1D1seq1 (new)-response to 6-29-04 action.txt

Output Set: N:\CRF4\10072004\I993234B.raw

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147      (i) SEQUENCE CHARACTERISTICS:
148          (A) LENGTH: 28 base pairs
149          (B) TYPE: Nucleic Acid
150          (C) STRANDEDNESS: Single
151          (D) TOPOLOGY: Linear
153      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
156      CAGGGCCCCG CAGTCTAGGC ATGGTTGG 28
158  (2) INFORMATION FOR SEQ ID NO: 5:
160      (i) SEQUENCE CHARACTERISTICS:
161          (A) LENGTH: 1438 base pairs
162          (B) TYPE: Nucleic Acid
163          (C) STRANDEDNESS: Single
164          (D) TOPOLOGY: Linear
166      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
169      GAATTCCGGC GCGGAGGCCG AGAGAGAAGT CACTTGCCCT GGCTCTACCT 50
171      TGAAGTGGTT CTCAGGGTTG GGGCGAGAGT CGGGGTGGGG ACCGAGATGC 100
173      AGCTCTATCC TGTGCCCCTG GTCGCAGCAG GCAGCCCAGC GCTTCGCGTG 150
175      TTCTACTTGG CCTGTCCGCT GCCGCCTAAT GAGCTCAGGT CTAGGCCGAG 200
177      CAGAGGGGGC ACCTGGTCCG ACTCGGTTGG GCTCGGGCGG CCCC GCCTCC 250
179      CCCC GCCCGC CAGGCGGGCC CTTCTCGACG GCGCGGGGCG GGCCCTGCGG 300
181      GCGCGGGGCT GAAGGCGGAA CCACGACGGG CAGAGAGCAC GGAGCCGGGA 350
183      AGCCCTGGG CGCCCGTCGG AGGGCTATGG AGCAGCGGCC GCGGGGCTGC 400
185      GCGGCGGTGG CGGCGGCGCT CCTCCTGGTG CTGCTGGGGG CCCGGGCCCA 450
187      GGGCGGCACT CGTAGCCCCA GGTGTGACTG TGCCGGTGAC TTCCACAAGA 500
189      AGATTGGTCT GTTTTGTGTC AGAGGCTGCC CAGCGGGGCA CTACCTGAAG 550
191      GCCCCTTGCA CGGAGCCCTG CGGCAACTCC ACCTGCCTTG TGTGTCCCCA 600
193      AGACACCTTC TTGGCCTGGG AGAACCACCA TAATTCTGAA TGTGCCCGCT 650
195      GCCAGGCCTG TGATGAGCAG GCCTCCCAGG TGGCGCTGGA GAACTGTTCA 700
197      GCAGTGGCCG ACACCCGCTG TGGCTGTAAG CCAGGCTGGT TTGTGGAGTG 750
199      CCAGGTCAGC CAATGTGTCA GCAGTTCACC CTTCTACTGC CAACCATGCC 800
201      TAGACTGCGG GGCCCTGCAC CGCCACACAC GGCTACTCTG TTCCCGCAGA 850
203      GATACTGACT GTGGGACCTG CCTGCCTGGC TTCTATGAAC ATGGCGATGG 900
205      CTGCGTGTCC TGCCCCACGT AATTCCTAGC TGTCGTGGGA TGGAGGGAAG 950
207      GGCGGCTGGG AGCAGAGCAG GGGCCTGGGG TGGGGCAGGT GCTGCTGGTT 1000
209      CAGGAATAGG AAGAGGGGAT AGGGAGGAGG GAGCCTTGGC CCTGTGATGG 1050
211      GTGGGCCCCA CTTCAGGCAA ACTTAGATGG CAAAAGAGCA ATCTGGATCC 1100
213      GCCTTAGCCA GATACATAAG GGTATTTGCC TTCACTTTCA GCCAGCATTC 1150
215      CCCCAGCGA TCCTAGCCAG ATATTACAGA TGATTTGTCA CTTACACAGA 1200
217      GAGTCACATT GATATAGCTT TAAAACTTGG GCTGAAGGAG GTTGAGGCTG 1250
219      CAGTGAGCTA TGATCGTGCC ACTGCACTTC AGCCTGGGCA ACAGAGCGAG 1300
221      ACCTATTAAA TAAATAAATA AATATTAAAT CTATTAAATA TTAAATATTA 1350
223      AATCTATTAA ATAAATAAAT ACAAAGGGCT GAGAGTCAGG ACTGTGCTGC 1400
225      TAGTTCTCTA GGGGATCTTG GGCAAGTGCA GAGAATTC 1438
227  (2) INFORMATION FOR SEQ ID NO: 6:
229      (i) SEQUENCE CHARACTERISTICS:
230          (A) LENGTH: 417 amino acids
231          (B) TYPE: Amino Acid
232          (D) TOPOLOGY: Linear
234      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

```

RAW SEQUENCE LISTING

DATE: 10/07/2004

PATENT APPLICATION: US/09/993,234B

TIME: 11:16:55

Input Set : A:\P1007P1D1seq1 (new)-response to 6-29-04 action.txt

Output Set: N:\CRF4\10072004\I993234B.raw

236	Met	Glu	Gln	Arg	Pro	Arg	Gly	Cys	Ala	Ala	Val	Ala	Ala	Ala	Leu
237	1				5					10					15
239	Leu	Leu	Val	Leu	Leu	Gly	Ala	Arg	Ala	Gln	Gly	Gly	Thr	Arg	Ser
240					20					25					30
242	Pro	Arg	Cys	Asp	Cys	Ala	Gly	Asp	Phe	His	Lys	Lys	Ile	Gly	Leu
243					35					40					45
245	Phe	Cys	Cys	Arg	Gly	Cys	Pro	Ala	Gly	His	Tyr	Leu	Lys	Ala	Pro
246					50					55					60
248	Cys	Thr	Glu	Pro	Cys	Gly	Asn	Ser	Thr	Cys	Leu	Val	Cys	Pro	Gln
249					65					70					75
251	Asp	Thr	Phe	Leu	Ala	Trp	Glu	Asn	His	His	Asn	Ser	Glu	Cys	Ala
252					80					85					90
254	Arg	Cys	Gln	Ala	Cys	Asp	Glu	Gln	Ala	Ser	Gln	Val	Ala	Leu	Glu
255					95					100					105
257	Asn	Cys	Ser	Ala	Val	Ala	Asp	Thr	Arg	Cys	Gly	Cys	Lys	Pro	Gly
258					110					115					120
260	Trp	Phe	Val	Glu	Cys	Gln	Val	Ser	Gln	Cys	Val	Ser	Ser	Ser	Pro
261					125					130					135
263	Phe	Tyr	Cys	Gln	Pro	Cys	Leu	Asp	Cys	Gly	Ala	Leu	His	Arg	His
264					140					145					150
266	Thr	Arg	Leu	Leu	Cys	Ser	Arg	Arg	Asp	Thr	Asp	Cys	Gly	Thr	Cys
267					155					160					165
269	Leu	Pro	Gly	Phe	Tyr	Glu	His	Gly	Asp	Gly	Cys	Val	Ser	Cys	Pro
270					170					175					180
272	Thr	Ser	Thr	Leu	Gly	Ser	Cys	Pro	Glu	Arg	Cys	Ala	Ala	Val	Cys
273					185					190					195
275	Gly	Trp	Arg	Gln	Met	Phe	Trp	Val	Gln	Val	Leu	Leu	Ala	Gly	Leu
276					200					205					210
278	Val	Val	Pro	Leu	Leu	Leu	Gly	Ala	Thr	Leu	Thr	Tyr	Thr	Tyr	Arg
279					215					220					225
281	His	Cys	Trp	Pro	His	Lys	Pro	Leu	Val	Thr	Ala	Asp	Glu	Ala	Gly
282					230					235					240
284	Met	Glu	Ala	Leu	Thr	Pro	Pro	Pro	Ala	Thr	His	Leu	Ser	Pro	Leu
285					245					250					255
287	Asp	Ser	Ala	His	Thr	Leu	Leu	Ala	Pro	Pro	Asp	Ser	Ser	Glu	Lys
288					260					265					270
290	Ile	Cys	Thr	Val	Gln	Leu	Val	Gly	Asn	Ser	Trp	Thr	Pro	Gly	Tyr
291					275					280					285
293	Pro	Glu	Thr	Gln	Glu	Ala	Leu	Cys	Pro	Gln	Val	Thr	Trp	Ser	Trp
294					290					295					300
296	Asp	Gln	Leu	Pro	Ser	Arg	Ala	Leu	Gly	Pro	Ala	Ala	Ala	Pro	Thr
297					305					310					315
299	Leu	Ser	Pro	Glu	Ser	Pro	Ala	Gly	Ser	Pro	Ala	Met	Met	Leu	Gln
300					320					325					330
302	Pro	Gly	Pro	Gln	Leu	Tyr	Asp	Val	Met	Asp	Ala	Val	Pro	Ala	Arg
303					335					340					345
305	Arg	Trp	Lys	Glu	Phe	Val	Arg	Thr	Leu	Gly	Leu	Arg	Glu	Ala	Glu
306					350					355					360
308	Ile	Glu	Ala	Val	Glu	Val	Glu	Ile	Gly	Arg	Phe	Arg	Asp	Gln	Gln

RAW SEQUENCE LISTING

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```

309          365          370          375
311 Tyr Glu Met Leu Lys Arg Trp Arg Gln Gln Gln Pro Ala Gly Leu
312          380          385          390
314 Gly Ala Val Tyr Ala Ala Leu Glu Arg Met Gly Leu Asp Gly Cys
315          395          400          405
317 Val Glu Asp Leu Arg Ser Arg Leu Gln Arg Gly Pro
318          410          415

```

320 (2) INFORMATION FOR SEQ ID NO: 7:

322 (i) SEQUENCE CHARACTERISTICS:

323 (A) LENGTH: 27 base pairs

324 (B) TYPE: Nucleic Acid

325 (C) STRANDEDNESS: Single

326 (D) TOPOLOGY: Linear

328 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

331 GGCGCTCTGG TGGCCCTTGC AGAAGCC 27

333 (2) INFORMATION FOR SEQ ID NO: 8:

335 (i) SEQUENCE CHARACTERISTICS:

336 (A) LENGTH: 25 base pairs

337 (B) TYPE: Nucleic Acid

338 (C) STRANDEDNESS: Single

339 (D) TOPOLOGY: Linear

341 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

344 TTCGGCCGAG AAGTTGAGAA ATGTC 25

346 (2) INFORMATION FOR SEQ ID NO: 9:

348 (i) SEQUENCE CHARACTERISTICS:

349 (A) LENGTH: 1634 base pairs

350 (B) TYPE: Nucleic Acid

351 (C) STRANDEDNESS: Single

352 (D) TOPOLOGY: Linear

354 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

357 CGGGCCCTGC GGGCGCGGGG CTGAAGGCGG AACCACGACG GGCAGAGAGC 50

359 ACGGAGCCGG GAAGCCCCTG GGCGCCCGTC GGAGGGCT ATG GAG 94

360 Met Glu

361 1

363 CAG CGG CCG CGG GGC TGC GCG GCG GTG GCG GCG GCG CTC 133

364 Gln Arg Pro Arg Gly Cys Ala Ala Val Ala Ala Ala Leu

365 5 10 15

367 CTC CTG GTG CTG CTG GGG GCC CGG GCC CAG GGC GGC ACT 172

368 Leu Leu Val Leu Leu Gly Ala Arg Ala Gln Gly Gly Thr

369 20 25

371 CGT AGC CCC AGG TGT GAC TGT GCC GGT GAC TTC CAC AAG 211

372 Arg Ser Pro Arg Cys Asp Cys Ala Gly Asp Phe His Lys

373 30 35 40

375 AAG ATT GGT CTG TTT TGT TGC AGA GGC TGC CCA GCG GGG 250

376 Lys Ile Gly Leu Phe Cys Cys Arg Gly Cys Pro Ala Gly

377 45 50

379 CAC TAC CTG AAG GCC CCT TGC ACG GAG CCC TGC GGC AAC 289

380 His Tyr Leu Lys Ala Pro Cys Thr Glu Pro Cys Gly Asn

381 55 60 65

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/993,234B

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Input Set : A:\P1007P1D1seq1 (new)-response to 6-29-04 action.txt

Output Set: N:\CRF4\10072004\I993234B.raw

L:1 M:244 W: Invalid beginning of sequence listing, Line=[Patin Docket Preview], General Header Line Not Processed!

L:31 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]

L:32 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]